

Remarks

In the Final Office Action dated November 20, 2009, the following rejections are presented: claims 1-6, 9-16, 19 and 20 stand rejected under U.S.C. § 103(a) over Green (U.S. Patent Pub. 2002/0168175) in view of Boyce (U.S. Patent No. 5,717,816); and claims 7-8 and 17-18 stand rejected under U.S.C. § 103(a) over the '175 and '816 references in view of Logan (U.S. Patent Pub. 2004/0255330). Applicant traverses all of the rejections and, unless explicitly stated by the Applicant, does not acquiesce to any objection, rejection or averment made in the Office Action.

Applicant respectfully maintains that the § 103(a) rejections are improper for the reasons presented in the previous response, hereby incorporated by reference in its entirety. In particular, the Examiner continues to overlook the fact that the claimed invention and the primary '175 reference operate in fundamentally different manners. The claimed invention, in certain embodiments, is directed to caching a portion of digital content data that includes both I-frames and non-I-frames and caching a block of separated I-frames (without non-I-frames) during a standard playback mode (*see, e.g.*, claims 3 and 19). The claimed invention accesses the cached digital content data in response to the standard play mode and accesses the cached block of separated I-frames (without non-I-frames) in response to a trick play mode (*e.g.*, fast-forward or reverse).

The '175 reference, in contrast, does not cache frames during standard playback for access in response to the fast-forward and fast-reverse modes. Instead, the '175 reference generates an index of the positions of the I-frames and then uses this index to create a video stream having a desired playback rate for playback in response to the selection of the fast-forward or fast-reverse mode. *See, e.g.*, paragraphs 0021-0022. For example, the '175 reference teaches that the buffering (*i.e.*, the alleged caching of separated I-frames without non-I-frames as modified by the '816 reference) of the selected I-frames (*e.g.*, I₁-I₄ or I₁ and I₂) occurs in response to a command to fast-forward or reverse a stored MPEG stream. *See, e.g.*, paragraph 0064. As such, the cited combination does not teach caching a block of separated I-frames and then accessing the cached block in response to a trick play mode as in the claimed invention.

In an effort to facilitate prosecution, Applicant has added new claims 21-24, which recite that the block of separated I-frames is cached during the standard play mode

and that the cached block of separated I-frames is accessed for playback in response to the selection of the trick play mode. As such, the caching of the block of separated I-frames is performed prior to the selection of the trick play mode. Applicant submits that this is different from the Examiner's proposed modification of the '175 reference in which the alleged caching of separated I-frames occurs after either the fast-forward or fast-reverse mode is selected. Furthermore, the '175 reference expressly teaches away from caching a block of separated I-frames during the standard play mode and then accessing the cached block in response to selection of a trick play mode, which would render the '175 reference unsatisfactory for its intended purpose. *See, e.g.*, the recent *KSR* decision and M.P.E.P. § 2143.01. Specifically, the '175 reference generates an index of the positions of the I-frames, which is used in response to selection of the fast-forward or fast-reverse mode, to generate a video stream having a desired playback rate for playback, thereby eliminating "the need to use extensive memory resources to buffer the digital video when playing the digital video in reverse mode." *See, e.g.*, paragraphs 0021-0022. Thus, modifying the '175 reference to cache a block of separated I-frames for playback in response to a trick play mode (as claimed) would undermine the purpose of the '175 reference. Accordingly, there is no motivation for the skilled artisan to modify the '175 reference in such a manner. Accordingly, Applicant submits that new claims 21-24 are in condition for allowance over the cited references.

Moreover, Applicant respectfully maintains that the cited '175 reference teaches away from playing back only I-frames in a trick play mode as proposed by the Examiner (*see, e.g.*, page 5 of the instant Office Action). Consistent with the recent *KSR* decision, M.P.E.P. § 2143.01 explains the long-standing principle that a §103 rejection cannot be maintained when the asserted modification undermines either the operation or the purpose of the main ('175) reference - the rationale being that the prior art teaches away from such a modification. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (U.S. 2007) ("[W]hen the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious.").

In this instance, the '175 reference teaches inserting one or more blank P-frames between I-frames to reformat a video stream and "reduce the bit rate of the video stream compared with playing back only I-frames" thereby conserving "resources of associated

display systems during decoding.” *See, e.g.*, paragraphs 0021-0022. Thus, modifying the ‘175 reference to playing back only I-frames in the fast-forward and fast-reverse modes (as proposed by the Examiner) would undermine the operation of the ‘175 reference. Accordingly, there is no motivation for the skilled artisan to modify the ‘175 reference in such a manner.

In the Advisory Action, the Examiner asserts that the primary reason the ‘175 reference inserts “P-frames is to achieve varying playback speeds, while the conservation of memory resources is a secondary benefit,” however, Applicant can find no such distinction in the ‘175 reference of these reasons being either primary or secondary. In any event, the Examiner acknowledges that the ‘175 reference identifies two purposes for inserting the P-frames (*i.e.*, conservation of memory resources and to achieve varying playback speeds). As the Examiner’s proposed modification would defeat one of these purposes (*i.e.*, conservation of memory resources), it is improper for the Examiner to assert that the skilled artisan would modify the ‘175 reference in such a manner. The Examiner further cites to paragraphs 0065-0068 of the ‘175 reference in the Advisory Action and asserts that “in order to achieve a 15-times playback rate, Green would simply insert no blank frames.” However, no such discussion of a 15-times playback rate is found in these portions of the ‘175 reference. Instead, paragraphs 0065-0068 discuss various playback rates each of which is achieved by inserting frames between the I-frames as is consistent with the two above discussed purposes of the ‘175 reference. Applicant further directs the Examiner to paragraph 0070 of the ‘175 reference which discusses generating a playback stream that includes non-consecutive I-frames (I_1 and I_3) with P-frames inserted in between I_1 and I_3 . As such, Applicant submits that, as is consistent with the two above discussed purposes of the ‘175 reference, a 15-times playback rate would be achieved by inserting the appropriate number of P-frames between non-consecutive I-frames.

In view of the above, the § 103(a) rejections are improper and Applicant requests that they be withdrawn.

Applicant further traverses the § 103(a) rejection of claims 2 and 12 because the ‘175 reference teaches away from the Examiner’s proposed modification of the ‘175 reference. As discussed above, the ‘175 reference does not teach caching a block of

separated I-frames and then accessing the cached block in response to a trick play mode, but instead the alleged caching of separated I-frames occurs in response to a command to fast-forward or reverse a stored MPEG stream. *See, e.g.*, paragraph 0064. The Examiner further proposes to modify the '175 reference such that the block of separated I-frames includes multiple I-frames from both before and after a current playback position. Applicant submits that such a modification is illogical in the context of the relied upon portions of the '175 reference because the alleged caching of separated I-frames in the '175 reference occurs in response to the generation of a video stream for the selected mode (*e.g.*, either fast-forward or reverse). Thus, modifying such a video stream to include multiple I-frames from both before and after a current playback position would appear to result in the generation of a video stream that does not implement the selected playback mode (*e.g.*, either fast-forward or reverse). As such, the Examiner's proposed modification appears to render the '175 reference inoperable and there is no motivation for the skilled artisan to modify the '175 reference in such a manner. Accordingly, the § 103(a) rejection of claims 2 and 12 is improper and Applicant requests that it be withdrawn.

In view of the remarks above, Applicant believes that each of the rejections/objections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, David Schaeffer, of NXP Corporation at (202) 876-6170.

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